

Melanism in New Jersey *Catocala* Schrank (Lepidoptera, Noctuidae)

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Abstract: Brief discussions, counts, and descriptions are given of reared melanic forms of *Catocala micronympha* Guen. and *C. minuta* W. H. Edwards.

In the Spring of 1966, seventy-five *Catocala micronympha* were reared from eggs laid by 4 females obtained in July, 1965 at black lights in Lebanon, New Jersey. The female parents were all more or less brownish black or melanic. All but 6 of these reared individuals were more or less melanic. They may be characterized best by comparison with the 9 figures of *C. micronympha* given by Barnes and McDunnough (1918, Mem. Amer. Mus. Nat. Hist., n. ser., Vol. III, part 1, Pl. 9, figs. 22–30). Of the specimens figured there, one is a brownish black form, *gisela* Meyer, and the other 8 are brown and grey with a complete absence of black. Among the reared specimens 6 are of the *gisela* form, and several are like *gisela* but have the white sordid rather than clear. Twelve specimens resemble the form *hero* Henry Edwards, but have the wing bases greyish rather than brownish and the apices of the fore wings black rather than brown. Forty-two specimens are all black with only a faint whitish sub-terminal line; and the remainder of the specimens are more or less evenly grey-black. Dr. A. E. Brower of Augusta, Maine has commented (in litt.) that *gisela* is a genetic form of *C. micronympha* known long before any appreciable melanism appeared in the genus, and that now we have melanic specimens of *gisela*.

Thirty-one specimens of *C. minuta* W. H. Edwards were reared from pupae, also collected in Lebanon. Compared with the forms figured by Barnes and McDunnough (loc. cit. figs. 1–6) 20 specimens resemble fig. 5, which is mostly dark brown, but are darker and show no brown; and 11 specimens resemble f. *parvula* W. H. Edwards (fig. 2) but have the brown replaced by blackish grey, and the inner margin black.

In 1960 I described the melanic f. *broweri* of *C. connubialis pulverulenta* Brower from Lebanon (Jour. Lepid. Soc., 14: 177). Until 2 years ago this was the commonest form at Lebanon. Since then, however, both *broweri* and the nominate form, *pulverulenta*, have almost disappeared from this area, being replaced by *C. micronympha* which was first seen here about five years ago.

This region of New Jersey Hunterdon County, is mostly farm land with hilly areas of deciduous woods. Industries are 30–60 miles distant. Many melanic forms of various species of Lepidoptera, especially of *Catocala*, have been taken here, which indicates that air pollution extends this far. However, melanic forms of *Catocala* are also numerous in northern New Jersey where

there are mountains and continuous, dense woods mixed with huge hemlocks and pines. In the latter case it is thought that the Lepidoptera have become adapted to their surroundings, and that industrial air pollution does not extend this far.

On the other hand, no melanic forms of *Catocala* have been collected in the dense pine woods of the pine barrens of southern New Jersey, although many nights have been spent there sugar-baiting and light-collecting.

During the last 6 seasons many different ways have been tried to mate the normal and melanic forms. Most of the females mated do lay eggs, but these have always collapsed and failed to hatch.

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Insect Attractants

Two acrylic auto paints have been reported to be effective attractants for sap beetles in *Science*, **156**: 946-947 (May 19, 1967).